

Electricity Cost Calculator (cont.)

Spreadsheets

Activity 5

Procedure

1. Open a new spreadsheet document using Google Docs.
2. At the top of the document in the **Unsaved Spreadsheet** box, type your last name and "Electricity Cost Calculator." Click **OK** in the **Rename Document** window (Figure 5-2).

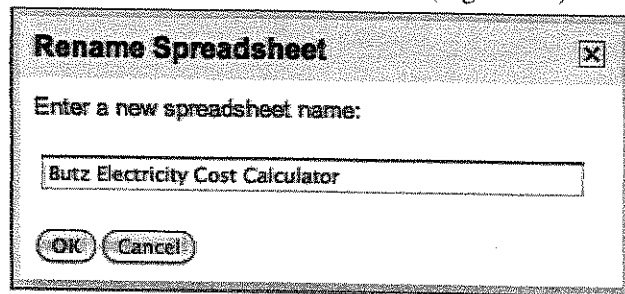


Figure 5-2

3. Spreadsheets are made up of columns that are identified by letters (A, B, C, etc.) and rows that are identified by numbers (1, 2, 3, etc.).
4. The location within a spreadsheet where a column meets a row is called a *cell*, and is identified by both a letter and number (Figure 5-3).

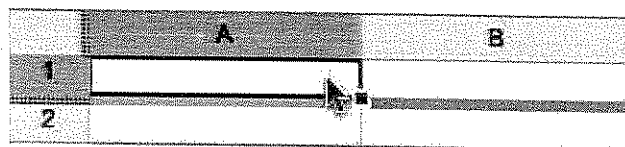


Figure 5-3

5. Click into cell A1 and enter the following column label: "Appliance."
6. Next, increase its font size to 12 pt by clicking the **Font size** button (Figure 5-4)

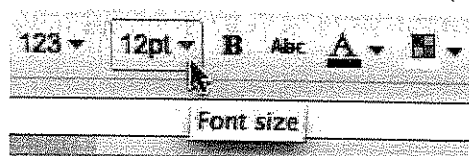


Figure 5-4

7. Now use the **Bold** button (B) located just to the right of the **Font Size** button to make the font bold.
8. Now center your label within its cell using the **Align** button (Figure 5-5).

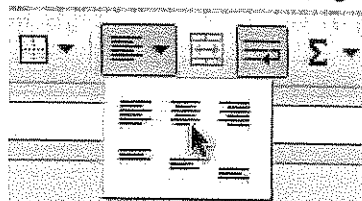


Figure 5-5

9. Hit the **Tab** key on your keyboard to move you over to cell B1. Now type the following column heading: "Hours/Day Used." Center the label in its cell, increase its font size to 12 pt, and also make it bold.

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10. Next, you will have to widen column B so that its label fits on one line. To do this, take your cursor and bring it between columns B and C, then click and drag to the right until column B is wide enough (Figure 5-6).

Formula: Hours/Day Used

	A	B	C
1	Appliance	Hours/Day Used	
2			

Figure 5-6

11. Use Figure 5-7 below to complete setting up your spreadsheet headings. Make sure to increase the font size to 12 pt, center the text in each cell, and make the text bold.

	A	B	C	D	E	F
1	Appliance	Hours/Day Used	Watts	Watt Hours	Kilowatt Hours	Cost of Use
2						

Figure 5-7

12. Next, you are going to change the fill color for your headings. Click and drag over all the cells you created in Row 1 to highlight them, then click on the **Text background color** button and choose **light gray**. (Figure 5-8).



Figure 5-8

13. Now click into cell A2, and enter "26-inch LCD TV." Hit the **Enter** key on your keyboard to bring you down to cell A3. Type "Window Fan."
14. Finally, click into cell A4 and type "Personal Computer."
15. Next, use the information in Figure 5-9 below to fill in the electrical-use data for each appliance. Make sure to center the text in each cell.

	A	B	C
1	Appliance	Hours/Day Used	Watts
2	26-inch LCD TV	5	110
3	Window Fan	10	150
4	Personal Computer	5	125

Figure 5-9

16. Now click into cell D2. In this cell you will insert a formula that will calculate the amount of watt hours used by the television. Watt hours is simply the amount of watts multiplied by the number of hours used for an electrical device. In cell D2, type "**=B2*C2**," then hit the **Enter** key. The = sign tells the cell that there is a formula and to perform the calculation that follows it. The * symbol instructs the formula to multiply. The product of 5 hours x 110 watts, which is 550 watt hours, should now appear in cell D2.

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17. Now you can easily apply the formula to the data in rows 3 and 4. Click back into cell D2, and grab the blue anchor point located at the bottom right of the cell (Figure 5-10).

Watt Hours	Kilowatt Hours
550	

Figure 5-10

18. Click and drag to highlight cells D3 and D4. The formula will now automatically be applied, and the products will appear in cells D3 and D4 (Figure 5-11).

D	E
Watt Hours	Kilowatt Hours
550	
1500	
625	

Figure 5-11

19. Next, click into cell E2. In this cell, you will enter the formula to calculate the amount of kilowatt-hours each appliance uses. A kilowatt-hour is equal to 1,000 watt-hours. Enter the following formula in cell E2: `"=D2/1000."` The / symbol instructs the formula to divide. Hit the **Enter** key to apply the formula.
20. Now, click back into cell E2, grab the anchor point, and drag down through cells E3 and E4 to apply the formula to rows 3 and 4. The quotients will appear in these cells.
21. Next, click into cell F2. Here you will enter a formula to determine the cost in dollars and cents of operating each appliance. The national average cost per kilowatt-hour of electricity is 11 cents. In cell F2, type the following formula: `"=E2*0.11."` Hit the **Enter** key on your keyboard to apply the formula to the cell.
22. Now click back into cell F2, grab the anchor point, and drag down through cells F3 and F4 to apply the formula to rows 3 and 4. The quotients will appear in these cells.
23. Click on column header F to select the entire column. You will now change the format of the numbers in this column to display as currency. Go to the **More formats** button and choose the **Currency** option with two decimal places (Figure 5-12).

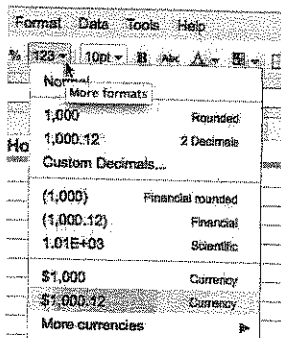


Figure 5-12

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24. The cost of electricity of operating each appliance should now display as currency (Figure 5-13). Make sure to center all numbers in all the cells using the **Align** button.

F	
Cost of Use	
	\$0.06
	\$0.17
	\$0.07

Figure 5-13

25. Next, click into cell A5 and type "Totals." Make it bold by using the **Bold** button (B) and center it within the cell. Hit the **Tab** key to move you into cell B5. Now you are going to use the **Functions** tool (Figure 5-14) to insert a function that will total the numbers in each column.

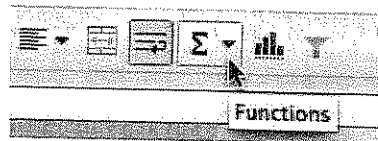


Figure 5-14

26. Click the **Functions** button and select SUM (Figure 5-15).

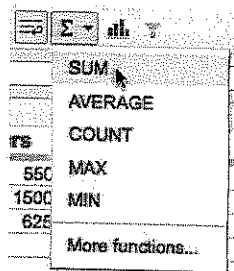


Figure 5-15

27. The SUM function will now be inserted into cell B5. Next, you need to select the cells to add together. To do this, just click and drag over cells B2 through B4 (Figure 5-16).

	A	B
1	Appliance	Hours/Day Used
2	26-inch LCD TV	5
3	Window Fan	10
4	Personal Computer	5
5	Total	=SUM(B2:B4)
6		

Figure 5-16

28. Next, hit the **Enter** key, and the sum of cells B2 through B4 should appear in cell B5. Click back into cell B5 and center the number using the **Align** button.
29. Insert the SUM function into cells C5 through F5, and center the numbers.
30. Your project is now complete!